Ph.D. Research Proposal Topic

Impact of PM POSHAN on Education Level of School Children in Madhubani District of Bihar

University PG Department of Economics
LNMU, Darbhanga, Bihar

Supervisor

15-3-2024

Dr. Awadhesh Kumar
Assistant Professor,
Department of Economics,
R.K College, Madhubani
(A constituent unit of L. N. Mithila University, Darbhanga)
Email: kumar.awadhesh205@gmail.com

Dr. Awadhesh Kumar
Assistant Professor
Department of Economics
R.K. College, Madhubani

Ph.D. Scholar
Isha Priya
15.03.2024

Isha Priya,
PAT Registration No. E2205022
Session: 2021-22

1. Introduction

Education is the backbone of developing countries. Education plays a lead role in advancing human capital as population's knowledge, abilities, and skills that contribute to economic growth. Sustainable Development Goals 2030 emphasize that all boys and girls should receive a free, equitable, and high-quality primary and secondary education. Since independence, Indian Government has launched many projects to promote education, in which a Mid-Day Meal is one of the important schemes, which is currently known as the name of PM POSHAN.

PM POSHAN Scheme was launched in India from 15th August 1995 on the basis of the study[1] by Dreze, J. and Sen (1991), under the name of "National Programme of Nutritional Support to Primary Education (NP-NSPE)". In October 2007, NP-NSPE was renamed as National Programme of Mid-Day Meal in Schools, which is popularly known as mid-day meal Scheme whose main purpose is to motivate the Government and Government-Aided school's children to attend the class by providing hot cooked meals. IN September 2021, the mid-day meal Scheme was renamed 'PM POSHAN'[2] or Pradhan Mantri Poshan Shakti Nirman. "Suposhit Bharat, Sakshar Bharat, Sashakt Bharat" is the theme for PM POSHAN 2023.The main goals of PM POSHAN are to address two pressing issues that the majority of children in India face: hunger and education by improving the nutritional status of children in government and government-aided schools, as well as embolden them to attend school more regularly and concentrate on classroom activities.

In Bihar, the PM POSHAN scheme was started in 1995. In 2001, The Hon'ble Supreme Court directed all the state governments to provide hot cooked meals to all primary school children. Even after two years of the Supreme Court order, Bihar Government could not provide hot-cooked meals (Dreze, J. and Goyal, A. (2003)). From January 2005, the Bihar Government started to provide hot cooked meals to all primary schools (Class I-V) and from February 2008, this scheme started covering up to class 8th. According to the PM POSHAN Guidelines, each student in all primary schools (Class I–V) should intake 450 calories and 12 grammes of protein per day, while students in middle schools (Class VI–VIII) should intake 700 calories and 20 grammes of protein per day. Currently, In Bihar, the total number of schools obligated to provide mid-day meal is 72478 and out of this mid-day meal is serving in 70202 schools. One of the goals of the PM POSHAN Programme is to boost child enrolment, and records show that this programme has succeeded in increasing the number of children enrolled. According to the economic survey 2022-23, the total enrolment of students in 2021-22 from class I to class V is 117.81 lakhs and for class VI to VIII it is 61.91 lakhs in Bihar state. Also, in 2021–22, 75.87 lakh children from classes I to V and 42.33 lakh children from classes VI to VIII received MDMs on the daily basis.

---

[1]This study explains the definition of hunger.

[2]Implemented by the ministry of education, GoI.

15.3.2024
Dr. Awadhesh Kumar
Assistant Professor
Department of Economics
College, Madhubani

Ashd Prajd
15-03-2024

While in Madhubani district, the total number of enrolments in 2021-22 for primary school is 6.01 lakhs and for middle school it is 3.25 lakhs. Also, the total number of children in primary school in 2021-22 availing MDMs per day is 3.83 lakhs and for middle school it is 2.17lakhs.

2. Literature Review: Studies on Mid-Day Meal and Education Level

There are various studies to examine the effect of Mid-day Meal scheme on education level of school children. Some important studies are reviewed as follow.

Laxmaiah et. al (1999) has conducted a study in Karnataka to observe the effect of the Mid-Day Meal (MDM) Program on enrolment, attendance, retention, and dropout rate in the schools and how it impacted both nutritional status and school performance. For the data collection, they used a multistage random sampling method. The study stated that the nutritional status was assessed by 1361 children in MDM schools and 1333 in non-MDM schools. The result showed that the nutritional status of MDM school is better than non-MDM school. The number of children enrolled in schools with the Mid-Day Meal program was higher (72%), compared to schools in non-MDM areas (68%). The percentage of students with better attendance was higher (97.8%) in Mid-Day Meal schools than in non-MDM schools (95%). The result for retention rate in MDM schools was better with 80.2% than in non-MDM schools, which had 77%. It was surprising to observe that the retention was higher among girls in MDM areas while the proportion was higher among boys than girls in non-MDM areas. The study about dropout rates varied from 14% to 18% in MDM schools, as against 27 to 36% in non-MDM schools.

Deka (2021) has focused on studying of the impact of the Mid-day Meal programme on attendance of primary school children in the Rani Area of Kamrup District, Assam. Attendance of student in the school in Rani area of Kamrup district was classified into three categories, they are 1: Poor (0-29%), 2: Average (30-59%), and 3: Good (60% and above). From the study it is noticed that poor attendance of students was less in percentage, but average attendance was more in the data collected. It means that good attendance was less. It was not good sign for primary education.

A study by Nath and Nath (2015) examined the effects of the Mid-Day Meals programme on primary school students' enrolment and retention in Bolpur's Sriniketan Block (BSB), located in the Birbhum District of West Bengal state. According to this study, enrolment has increased since midday meals were introduced. There was an increased interest from parents to send their child. The percentage of retention has increased when mid-day meals were introduced. The Mid-Day Meals programme contributed to a rise in the enrolment and attendance of low-

15.3.2024
Dr. Awadhesh Kumar
Assistant Professor
Department of Economics
R.K. College, Madhubani

Ishd Pojyd
15.03.2024

income students. The mid-day meal programme was viewed favourably by all the rural instructors. It was shown that head teachers in rural areas had a positive attitude regarding the implementation of the Mid-Day Meals initiative at the primary school level.

Hamid and Hamid (2012) carried out research to determine how the midday meal programme effected the enrolment, attendance, and dropout rates of kids in the Anantnag district of Jammu and Kashmir's elementary schools, studies based on Log Linear model. The results demonstrated the midday meal's significant impact on enrolment, attendance, and dropout rates. Due to their social standing and rank, it was discovered that kids from the general caste were not eating lunch with students from the reserved caste (ST, SC, and OBC). It was discovered that the food materials provided for the school lunch programme were of very low quality. The plan also had administrative and managerial issues. Overall, it had a negative effect on the learning environment. The plan experienced financial difficulties as well. The distribution of funds was not only erratic but also insufficient.

Singh (2017) has conducted research on the midday meal program's overall strength and its effects on schoolchildren in rural areas of Dharwad district in Karnataka and Jhansi district, in Uttar Pradesh state. Rural school children and their parents were happy with the quantity and quality of the food. She also came to the conclusion that while the Mid-Day Meal Programme improved socialisation and nutritional status, malnutrition still exists in rural areas. However, she felt that the mid-day meal scheme is good and should be continuous.

Study of Mall (2017) focused to assessing the performance of mid-day meal on nutritional status of school running in Muzaffarpur town of Bihar. Statistically significant differences were observed in the result. Given that malnutrition was more common in children, it was imperative that the diet plan be changed, that the MDM Scheme's subsidies and oversight be re-evaluated.

Sharma (2013) has focused on the Mid-Day Meal Scheme and Primary Education in India and their quality issues. According to what she said in her study, children from low-income homes attended government primary schools. However, the MDM scheme's key goals were better child nutrition; social justice; and higher enrolment, attendance, and retention. Even if enrolment figures have increased and the number of dropouts may have decreased, but food and education quality have also declined. Since teachers are engaged in a variety of other responsibilities and sufficient attention is not being done when preparing the food.

Alim et.al (2012) studies suggested that MDM has not any remarkable impact on educational and nutritional attainments among children.

According to data gathered from a quasi-experiment, Kundu.et.al. (2014) studied the quality of education among primary school students getting midday meals. The findings of this quasi-

15.3.2024
Dr. Awadhesh Kumar
Assistant Professor
Department of Economics
College, Madhu...

Ushd Pasad
15.03.2024

experimental study indicate that there is insufficient maintenance of the educational quality among the recipients of the noon meal programme. Less motivated parents that choose to send their children to public primary schools are typically those from lower socioeconomic backgrounds. The parents' lack of interest in their children's education is the primary cause of such outcome.

Dreze, J. and Khera, R. (2008) studies concluded MDM didn't make any considerable impact on education outcome.

3. Statement of the problem

Education is the most important factor for the development of the country. Madhubani district is a flood prone area because of this they are socially and economically backward. Due to which the basic needs of children like education and food are affected. In this situation it becomes vital to examine the Government's PM POSHAN scheme in order to determine whether or not the children are truly benefiting from it. The PM POSHAN scheme is implemented in order to meet these two fundamental demands i.e. basic education and basic nutrition and does PM POSHAN scheme succeed in reaching its goal? If there are any gaps in it, they can be addressed so that the Government can fill them in the necessary ways.

4. Objectives

The major objectives of this research are to be justified, are:

- To study the popularity of the Mid-Day Meal among school children.
- To study the effect of PM POSHAN on enrolment, attendance, and retention in Madhubani district.
- To examine the socio-economic status of the school children's family of the study area.
- To examine the nutritional status of school children who are the beneficiaries of PM POSHAN in Madhubani district.
- To study the impact of PM POSHAN on the education level of school children in Madhubani district.

15.3.2024
Dr. Awadhesh Kumar
Assistant Professor
Department of Economics
R.K. College, Madhubani

Ishd Prsyd
15.03.2024

5. Hypothesis of the Study

The hypothesis of this research is designed as follow.

- Enrolment, attendance, and retention due to PM POSHAN are positively influenced.
- Children from lower socio-economic status are highly enrolled in both types of schools in Madhubani District.
- The calorie consumption of school children due to PM POSHAN is positive in Madhubani District.
- There is a positive relation between PM POSHAN and the nutritional status of school children in Madhubani District.
- The education level of school children in the study area is highly influenced.

6. Research Methodology

Madhubani is one of the densely populated districts of Bihar with rural urban ratio of 96:04 (Census 2011). Per capita income of Madhubani is Rs 22.6 thousand (Economic survey of Bihar 2019-20) which is one of lowest per capita income district of Bihar. That's why, my study area is such impoverished district of Bihar i.e. Madhubani. Sampling population of this study is based on *Multistage stratified sampling method.*

15-3-2024

Dr. Awadhesh Kumar
Assistant Professor
Department of Economics
R.K. College, Madhubani

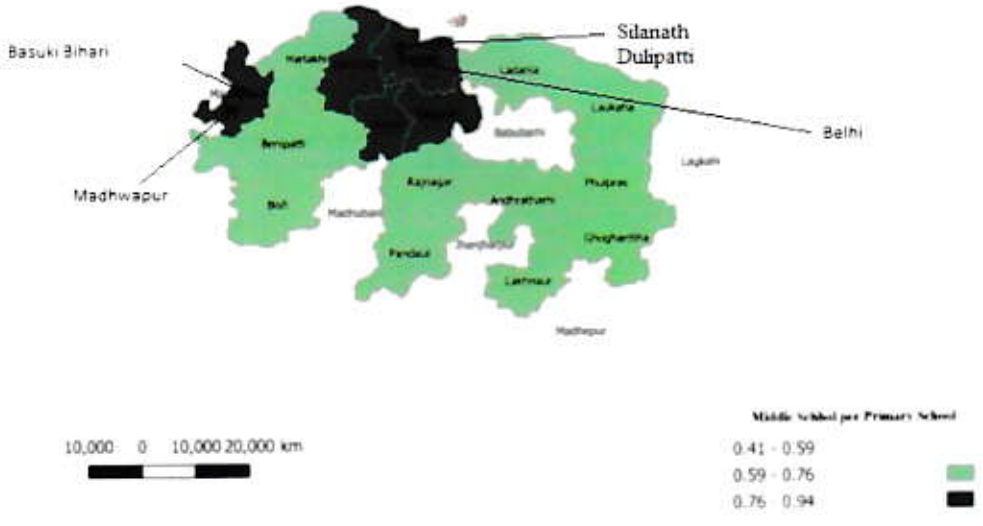
15.03.2024

Table.1 Primary and Middle School in Blocks of Madhubani District, Bihar

Block	Villages	Primary School	Middle School	Total Households	Total Population of Village	Households per Village	Primary School Density*	Middle School Density*	Index*
Andhratharhi	48	46	33	38475	191680	802	1.20	0.86	0.72
Babubarhi	63	59	34	43523	217331	691	1.36	0.78	0.58
Basopatti	34	32	30	33355	173499	981	0.96	0.90	0.94
Benipatti	103	88	53	70277	361400	682	1.25	0.75	0.60
Bisfi	57	52	36	65251	320704	1145	0.80	0.55	0.69
Ghoghardiha	49	47	31	33484	174831	683	1.40	0.93	0.66
Harlakhi	44	43	28	37312	196251	848	1.15	0.75	0.65
Jainagar	21	20	17	33889	171918	1614	0.59	0.50	0.85
Jhanjharpur	67	54	23	36807	174930	549	1.47	0.62	0.43
Kaluahi	20	18	14	22909	117282	1145	0.79	0.61	0.78
Khajauli	32	31	24	28729	143583	898	1.08	0.84	0.77
Ladania	28	27	19	33560	175561	1199	0.80	0.57	0.70
Lakhnaur	44	36	25	36887	167841	838	0.98	0.68	0.69
Laukaha	47	44	27	40375	212127	859	1.09	0.67	0.61
Laukahi	66	62	31	42295	208317	641	1.47	0.73	0.50
Madhepur	86	77	33	58460	267606	680	1.32	0.56	0.43
Madhubani	78	61	25	47256	240786	606	1.29	0.53	0.41
Madhwapur	43	39	32	27691	134704	644	1.41	1.16	0.82
Pandaul	75	61	36	54966	270642	733	1.11	0.65	0.59
Phulparas	42	37	23	32889	166018	783	1.12	0.70	0.62
Rajnagar*	63	57	39	50134	238873	796	1.14	0.78	0.68
Total Villages	1110	991	613	868524	4325884	782	1.14	0.71	0.62

*Source: Data computed by Author from Village Directory Census, 2011. (@ indicates Primary and Middle school per 1000 households while * indicates the Middle School per Primary School.)*

Map1: Middle school per primary school in Madhubani district



Source: Data from 'Village Directory Census, 2011

15-3-2024
Dr. Awadhesh Kumar
Assis... Professor
Department of Economics
R.K. College, Madhubani

Ashok Paiyd
15.03.2024

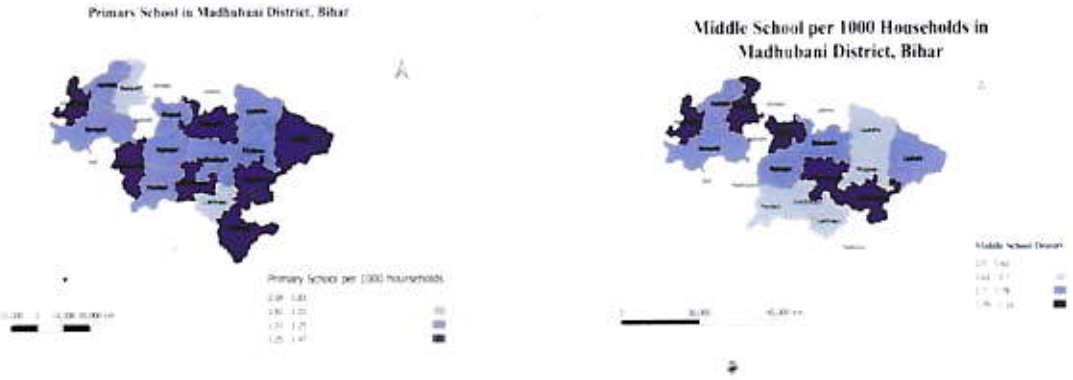
Stage-1

In the first stage, all 21 blocks of Madhubani district are classified on the basis of middle school per primary school index as shown in Table 1 and Map1. Out of 21 blocks, five blocks are selected, which have higher value in the index because it shows the availability of middle school, with term of primary school.

Stage-2

In the second stage, out of these five blocks, two blocks are selected which have "more school (both primary and middle) density" and "less school (primary and middle) density". Which are Madhwapur and Jainagar.

Map.2 Primary and Middle School per 1000 Households in Madhubani District



Source: Data from "Village Directory Census, 2011

Table 2 Block selected in Madhubani district.

Block	Village	Primary School	Middle School	Total Households	Total Population of Village	Household per Village	Primary School Density#	Middle School Density#	Total School Density#
Madhwapur	43	39	32	27691	134704	644	1.41	1.16	2.57
Jainagar	21	20	17	33889	171918	1614	0.59	0.5	1.09

Source: Data computed by Author from Village Directory Census, 2011. (# indicates Primary and Middle school per 1000 households)
Note: Preference given to more and less school density blocks because it reflects number of primary and middle school per thousand households.

Stage-3

In the third stage, from each block, two villages are selected on the basis of availability of middle and primary school. Therefore, the total number of villages is 4, namely **Madhwapur, Basuki Bihari** from Madhwapur block and **Belhi, Silanath Dulipatti** from Jainagar block.

15-3-2024
Dr. Awadhesh Kumar
Assistant Professor
Dept. of Economics
L.N. College, Madhubani

Ishd Parvez
15·03·2024

Stage-4

In the fourth stage, from each village, one primary and one middle school are selected. Therefore, the total number of primary schools is 4 and middle school is 4.

Stage-5

In the fifth stage, from each class of primary school (I-V), 10 school children are selected on a random basis. Therefore, the total number of school children from each primary school is 50. Similarly, from each class of middle school (VI-VIII), 10 school children are selected on a random basis. Therefore, the total number of school children from each middle school is 30. Thus, the total number of school children is 320. And also, going to do a survey of such children's households to analyse the socio-economic status of their family.

6.1 Indicators for the Assessment of Nutritional and education level:

The anthropometry parameters weight, height, and Body Mass Index (BMI) has been applying to evaluate school children's nutritional health. Additionally, these parameters are using to calculate the indices of weight for age (underweight), height for age (stunting), and weight for height (wasting). Also, sample school's meal menu is using to check the caloric intake of the school children to determine their nutritional status.

To determine the education level of a school's children, applying basic numeracy, learning aptitude, comprehension tests for math and language as per the prescribed syllabus of the Bihar Government.

6.2 Empirical Model: Education and Nutrition Relationship

This research is going to see the impact of PM POSHAN on Education level of school children. Since PM POSHAN implies the better nutritional food for school children, a *nutritional index* could be made from given indicators. On the other hand, education level is found by the education index by using the given educational indicators.

Thus, a *Binary Logistic model* is applied to justify this research, it is explained as:

$$Ln\ (P/(1-P)) = a + bX,$$

Here, P/(1-P) = odd ratio, probability to get the children better[3] education level from the school.

X= Nutritional Index, provided by PM POSHAN

[3] Better education means school children get educational index score > and = 0.5. (0.5 is the threshold level).

15.3.2024
Dr. Awadhesh Kumar
Assistant Professor
Department of Economics
B.N. College, Madhubani

15.03.2024

7. Significance of the Study

Education has ability to transform lives, every child has the right to get this. Education is a potent weapon for reducing social inequality, promoting child survival, growth, development, well-being, and ending the cycle of poverty. Many studies have shown a correlation between poverty and low levels of education. As Madhubani is a socially and economically backward place, the two main areas of concern for this impoverished district are nutrition and education. So, the study of PM POSHAN scheme in Madhubani district becomes more important due to its especial need in meeting the nutrition and educational attainment of the children.

8. Tentative Chapters:

Chapter-1: Introduction of PM POSHAN

Chapter-2: Review of Literature

Chapter-3: Research Methodology

Chapter-4: Study of the PM POSHAN scheme on Enrolment, Attendance, and Retention.

Chapter-5: Study of the socio-economic status of the school children's family of the study area.

Chapter-6: Study of the PM POSHAN scheme on the nutritional status of school children in Madhubani district.

Chapter-7: impact of PM POSHAN on the education level of school children in Madhubani district.

Chapter-8: Result, Discussion and Conclusion

15.3.2024
Dr. Awadhesh Kumar
Assistant Professor
Department of Economics
K.K. College, Madhubani

15.03.2024

References

Dreze, J. and Sen, A. (1991). The Political Economy of Hunger, Clarendon Press, Oxford.

Dreze, J. and Goyal, A. (2003). Future of Mid-Day Meals. Economic and Political Weekly, 38(44), 4673-4683.

Laxmaiah, A. et. al (1999). Impact of mid day meal program on educational and nutritional status of school children in karnataka. Indian Pediatrics, 36(12), 1221-1228.

Deka, K. (2021). Impact of Mid-Day Meal (MDM) Programme on Attendance of Primary School Children in Rani Area of Kamrup District, Assam. Journal of Research in Humanities and Social Science, 9(7).

Nath, B. and Nath, I. (2015). A study of the impact of Mid-Day-Meals programme on enrolment and retention of primary school children. International Journal of Applied Research, 1(10), 407-413.

Hamid, Y. and Hamid, A. (2012). Mid–Day Meal Scheme and Growth of Primary Education: A Case Study of District Anantnag in Jammu and Kashmir. Bangladesh e-Journal of Sociology, 9(1).

Singh, N. (2017). MID DAY MEAL PROGRAMME AND RURAL SCHOOL CHILDREN: AN OVERVIEW OF STRENGTHS.: International Journal of Research in Humanities, Arts and Literature, 5(10), 2321-8878.

Mall, R. (2017). Performance of mid day meal (MDM) on nutritional status of school going children in Muzaffarpur town of Bihar. International Journal of Home Science, 3(3), 79-82.

Sharma, U. (2013). Mid-Day Meal Scheme and Primary Education in India: Quality Issues. International Journal of Scientific and Research Publications, 3(11), 2250-3153.

Alim, F. et. al (2012). Impact of Mid Day Meal Scheme on the Nutritional status and Academic achievement of school children in Aligarh city. Indian Journal of Scientific Research,3(2) 85-90.

Kundu, A. et. al (2014). Quality of Education among Primary School Children receiving Mid-Day Meal: Evidence from a Quasi-Experiment. Department of Economics, Jadavpur University, Kolkata, west Bengal, India, MPRA Paper No. 64232, posted 09 May 2015 14:05 UTC.

Dreze, J. and Khera, R. (2008). Mid day meal in Primary schools. Yojna issue-Child Rights, 52 (36-38).

Websites:

https://www.mdmsbihar.org/StateLevelFormat.aspx
http://www.dopahar.org/dopahar/index.php
https://mpra.ub.uni-muenchen.de/64232/
https://www.pib.gov.in/PressReleasePage.aspx?PRID=1759255#:~:text=Today%20the%20CCEA%20cleared%20the,Government%2C%20Government%2DAided%20Schools
https://pib.gov.in/Pressreleaseshare.aspx?PRID=1812421

15-3-2024
Dr. Awadhesh Kumar
Assistant Professor
Department of Economics
B.K. College, Madhubani

Ysha Priyd
15.03.2024